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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,778	10/22/2003	Naoki Abe	CHA920030025US1	1597

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HOFFMAN WARNICK LLC
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EXAMINER

MURDOUGH, JOSHUA A

ART UNIT	PAPER NUMBER
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3621

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

Office Action Summary	Application No. 10/690,778	Applicant(s) ABE ET AL.	
	Examiner JOSHUA MURDOUGH	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-37 is/are pending in the application.
- 4a) Of the above claim(s) 12-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgements

1. This action is responsive to Applicants' amendments received 10 March 2010.
2. This action has been assigned paper number 20100605 for reference purposes only.
3. Claims 1-3 and 5-37 are pending.
4. Claims 1-3 and 5-11 have been examined.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 and 5-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ziegler (US 2004/0044739) in view of Douceur (US 2004/0060042) further in view of Tochikubo (US 7,096,357).
7. As to claims 1, 3, 6-9, and 11, Ziegler shows:
 - a. A fraud detection system for detecting fraudulent transactions, comprising:
 - b. an interface **102** for inputting transaction data (via keyboard 108 and mouse 110) and outputting analysis results (on monitor 104); and
 - c. a tamper-resistant ("tamper proof server," [0112]) secure data processing unit (SDPU) **124**, wherein the SDPU includes:

- d. a security system (HSM) that can restrict access to data and program execution [0232];
 - e. an analysis system for analyzing inputted transactions [0006];
 - f. a plurality of surveillance algorithms (“several securing functions,” [0054] wherein the plurality of surveillance algorithms make a determination regarding a probability that inputted transactions are fraudulent (“if fraud is detected,” Id.)
8. Zeigler does not expressly show:
- g. a selection program for selecting at each of a sequence of random times a different surveillance algorithm to be used by the analysis system;
 - h. the selection program utilizes a random selection program for selecting surveillance algorithms;
 - i. measuring a randomness of the algorithm selection process using a technique selected from the group consisting of correlation and entropy measures; and
 - j. issuing an alert if the randomness goes under a predetermined threshold;
 - k. the surveillance algorithms are stored in an encrypted database; and
 - l. the further step of decrypting the selected surveillance algorithm..
9. However, Douceur shows random selection [0050] with a predefined correlation coefficient (“rho,” [0067]) and the calculation of the correlation coefficient from already generated random values [0074]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the teachings of Ziegler to add the calculations and selection method of Douceur so that a comparison of the predefined rho and the calculated rho would trigger an alert as taught by Ziegler if the difference exceeded a threshold.

The random selection of algorithms would allow for a more secure system through the use of differing algorithms but with efficiency near that of just using one algorithm because only one is in use at a time. The alert would allow for a notice that the system is not operating properly or has become too predictable. If the system becomes predictable, the added security of the rotating algorithms is diminished.

10. The Zeigler/Douceur combination does not expressly show:

- m. the surveillance algorithms are stored in an encrypted database; and
- n. the further step of decrypting the selected surveillance algorithm..

11. However, Tochikubo teaches an encrypted storage **13** of algorithms (C 4, LL 40-44) which requires that the algorithms be decrypted before use. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the teachings of Zeigler to store the securing functions in an encrypted database and decrypt them before use in order to ensure that the algorithms cannot be tampered with.

12. As to claim 2, Zeigler further shows:

- o. the SDPU further includes an algorithm performance system **1102** that assists the selection program in selecting surveillance algorithms [0062].

13. As to claim 5, Zeigler further shows:

- p. the security system includes an encryption system for encrypting and decrypting data [0038].

14. As to claim 10, Zeigler further shows:

q. the SDPU prevents observation by an outside observer of which surveillance algorithm is selected (observation of the execution of the software would be an unauthorized access [0232]).

Response to Arguments

15. Applicant's arguments filed 10 March 2010 have been fully considered but they are not persuasive.

16. Applicants argue:

17. "Applicants assert, that Zeigler never teaches or suggests a plurality of surveillance algorithm for detecting fraud" (Remarks, Page 11, partial paragraph).

18. Examiner's response:

19. The Examiner notes that "a plurality of surveillance algorithm for detecting fraud" is not claimed. It is the Examiner's position that Applicants are referring to the limitation "a plurality of surveillance algorithms stored in an encrypted database wherein the plurality of surveillance algorithms make a determination regarding a probability that inputted transactions are fraudulent" in claim 1.

20. Applicants state that Zeigler shows software that performs the functions of "generat[ing] a digital signal," "authenticat[ing] the terminal," "unload[ing] itself if fraud is detected," and "force an[] upgrade," and "validate itself." Clearly "unloading itself if fraud is detected" is

something the software contains an algorithm for if determines it needs to, when the probability of fraud is 100 percent. Authenticating the terminal and validating itself are additional algorithms that that would be run to help determine if there is a probability of fraud. If the terminal does not authenticate, there is a higher probability of fraud. Similarly, if the software cannot be validated, it has been corrupted or tampered with, which would result in incorrect or fraudulent transactions.

21. Applicants argue:

22. “Douceur does not teach “a selection program for selecting at each of a sequence of random times a different surveillance algorithm to be used by the analysis system.” Thus, the combination of Douceur and Zeigler do not render the present invention obvious” (Remarks, Page 12, partial paragraph).

23. Examiner's response:

24. The Examiner set forth that “[t]he random selection of algorithms would allow for a more secure system through the use differing algorithms but with efficiency near that of just using one algorithm because only one is in use at a time. The alert would allow for a notice that the system is not operating properly or has become too predictable. If the system becomes predictable, the added security of the rotating algorithms is diminished.” Applicants have not challenged the factual basis of this reasoning. Therefore, the Examiner's position is that one of ordinary skill in the art would understand the need or desire to have the randomly selected algorithms and thus, would search out pre-existing software to implement it. Douceur has already created software

for random selection. Therefore, it would be obvious to create a selection program for selecting random algorithms based on the software for selecting random layouts. Thus, the limitation of “a selection program for selecting at each of a sequence of random times a different surveillance algorithm to be used by the analysis system” is found in the combination of the references, not solely in Douceur.

25. Applicants argue:

26. “Applicants do not acquiesce in the correctness of the rejections and reserves the right to present specific arguments regarding any rejected claims not specifically addressed” (Remarks, Page 10, Paragraph 1).

27. Examiner's response:

28. Applicants are reminded of their duty under 37 C.F.R. 1.111(b) to point out the supposed errors in the Examiner's action. Applicants' statement suggests that there may be specific arguments that have not been presented. If Applicant continues to make statements of this nature, the responses containing such statements will be deemed *non bona fide*.

Conclusion

29. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA MURDOUGH whose telephone number is (571)270-3270. The Examiner can normally be reached on Monday - Thursday, 7:00 a.m. - 5:00 p.m.

32. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Fischer can be reached on (571) 272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Murdough
Examiner, Art Unit 3621

/ANDREW J. FISCHER/
Supervisory Patent Examiner, Art Unit 3621